

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
12 September 2002 (12.09.2002)

PCT

(10) International Publication Number
WO 02/070928 A1

(51) International Patent Classification⁷: **F16J 15/16**

Daniel [CA/CA]; 134 Ferguson Street, Atholville, New Brunswick E3N 4T6 (CA).

(21) International Application Number: PCT/CA02/00259

(74) Agent: **BERESKIN & PARR**; 40 King Street West, 40th Floor, Toronto, Ontario M5H 3Y2 (CA).

(22) International Filing Date: 28 February 2002 (28.02.2002)

(25) Filing Language: English

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:
2,335,691 1 March 2001 (01.03.2001) CA

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 09/962,229 (CON)
Filed on 26 September 2001 (26.09.2001)

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): **AV CELL INC.** [CA/CA]; 175 Mill Road, Atholville, New Brunswick E3N 4S7 (CA).

(72) Inventor; and

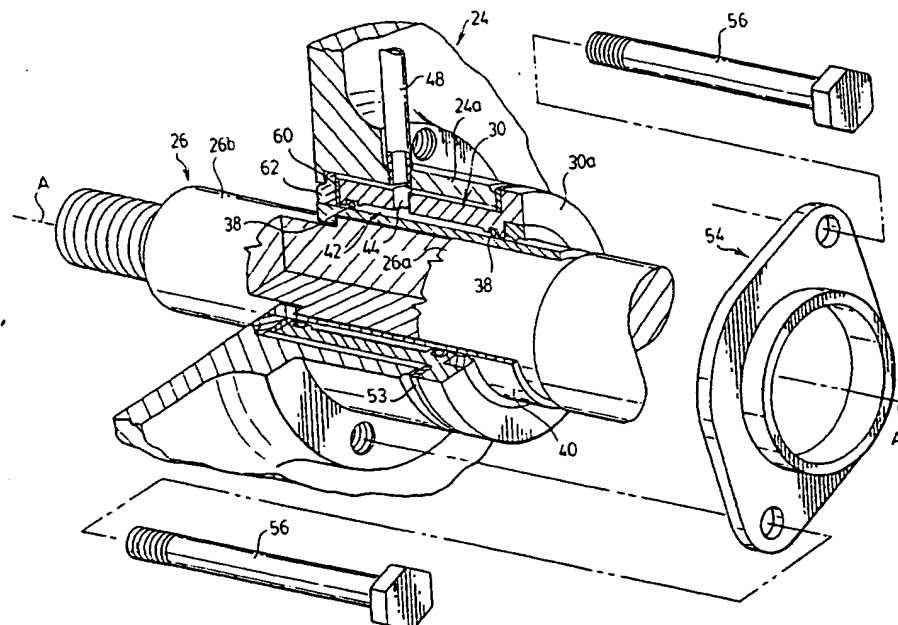
Published:

(75) Inventor/Applicant (*for US only*): **MURRAY, James,**

— with international search report

[Continued on next page]

(54) Title: **PRESSURIZED CHAMBER SEAL CARTRIDGE**



(57) Abstract: A seal cartridge (28) for a centrifugal pump (20) includes a housing (30) that fits within a conventional stuffing box of the pump and has a cylindrical internal surface receiving the shaft (26). A pair of annular grooves (34, 36) are provided internally of the housing adjacent respectively opposite ends thereof. Each groove receives an O-ring that runs in contact with the sleeve when the shaft rotates. The sleeve (40), housing and O-rings (38) define an annular chamber through which water is circulated to cool and lubricate the O-rings. The water is pressurized to cause the O-rings to deform and seal against the sleeve.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.